

7. Grace

Program Name: Grace.java

Input File: grace.dat

Grace is just learning to program, and is exploring how to do some simple math. The program she is solving inputs an integer, and outputs the square of it if the number is divisible by 3, the square root of it if the number has a remainder of 1 after being divided by 3, or the cube root of it if the remainder is 2, again after dividing by 3. She has decided to format all of the values to one rounded place of precision.

Your challenge is to write a program to help solve Grace's problem.

Input: Several integers N ($0 < N \leq 10000$) arranged vertically in a data file.

Output: A value for each integer, as indicated above (square, square root, or cube root), as shown below.

Sample input:

9
10
11

Sample output:

81.0
3.2
2.2